

Appl. No. 10/086,795
Amdt. dated 12/20/04

I. AMENDMENTS TO THE CLAIMS

Please cancel claim 24 and replace claim 4 as shown below. All pending claims are reproduced below, including those that remain unchanged. This listing of claims will replace all prior versions, and listings, of claims in the application:

Claim 1. (Previously Amended) A method for automatically producing a music video, comprising:

- receiving an audio signal;
- receiving a video signal;
- detecting transition points in the audio signal and the video signal;
- aligning in time the video signal with the audio signal;
- editing the aligned video signal; and
- merging the aligned video signal with the audio signal to form a music video signal.

Claim 2. (Original) The method of Claim 1, wherein the step of aligning comprises:

- forming a video segment comprising a portion of the video signal based upon the transition points in the video signal; and
- aligning the video segment with a transition point in the audio signal.

Claim 3. (Previously Amended) The method of Claim 2, wherein:

- a boundary of the video segment is defined by a transition point in the video signal; and

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the boundary of the video segment is aligned with the transition point in the audio signal.

Claim 4. (Currently Amended) The method of Claim 3, wherein:

the boundary is located at the beginning of the video segment.

Claim 5. (Original) The method of Claim 2, wherein:

a first and second transition in the audio signal define an audio segment having a length; and

the video segment has a video segment length, wherein the video segment length is reduced to equal the length of the audio segment.

Claim 6. (Original) The method of Claim 5, wherein:

the video segment is truncated in order to equal the length of the audio segment.

Claim 7. (Original) The method of Claim 5, wherein:

the video segment is evaluated using a suitability measurement in order to define a portion of the video segment equal to the length of the audio segment.

Claim 8. (Original) The method of Claim 1, wherein the step of detecting comprises:

parameterizing the audio and video signals in order to form corresponding sets of feature vectors; and

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evaluating the sets of feature vectors in order to determine the location of transitions in the corresponding signals.

Claim 9. (Original) The method of Claim 8, wherein:
the parameterization includes a histogram.

Claim 10. (Original) The method of Claim 8, wherein:
the parameterization includes a frequency domain transform.

Claim 11. (Original) The method of Claim 8, wherein the step of evaluating comprises:
constructing a self-similarity matrix based upon a distance metric for a set of feature vectors; and
extracting structure from the self-similarity matrix via a kernel correlation.

Claim 12. (Original) The method of Claim 11, wherein:
the distance metric is the Euclidean distance between feature vectors.

Claim 13. (Original) The method of Claim 11, wherein:
the distance metric is the cosine of the angle between feature vectors.

Claim 14. (Original) The method of Claim 11, wherein:
the distance metric is the Karhunen-Loeve distance.

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Claim 15. (Original) The method of Claim 8, wherein:

the evaluation of sets of feature vectors includes determining a difference between adjacent feature vectors.

Claim 16. (Original) The method of Claim 8, wherein:

the evaluation of sets of feature vectors includes determining an accumulated difference between a plurality of feature vectors.

Claim 17. (Original) The method of Claim 8, wherein:

the evaluation of sets of feature vectors includes comparing the time period between a previous transition and a feature vector in order to determine the location of a transition.

Claim 18. (Original) The method of Claim 1, wherein the step of aligning in time comprises:

aligning the detected transitions in the audio signal with the detected transitions in the video signal using dynamic programming.

Claim 19. (Original) The method of Claim 1, wherein the step of aligning in time comprises:

aligning the detected transitions in the audio signal with the detected transitions in the video signal using the tempo of the audio signal.

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Claim 20. (Previously Amended) The method of Claim 1, wherein the step of aligning in time comprises:

adjusting a transition detection threshold to produce a specific number of transitions corresponding to the desired number of video cuts; and

aligning the transitions of the audio signal with the transitions of the video signal.

Claim 21. (Original) The method of Claim 11, wherein:

the width of the kernel determines the duration of transitions detected.

Claim 22. (Original) The method of Claim 1, wherein the step of merging comprises:

combining the audio signal with a second audio signal associated with the video signal, wherein the audio signal is reduced in volume during periods of speech on the second audio signal.

Claim 23. (Original) The method of Claim 1, wherein the step of aligning comprises:

receiving a user selection designating a video segment for inclusion in the music video signal.

Claim 24. (Canceled)